



**Agency of Natural Resources  
Department of Environmental Conservation**

**Waste Management Division  
West Building  
802-241-3888**

**MEMORANDUM**

To: Allen Jarrell, EPA Removals  
cc: David McIntyre, EPA Removals  
bcc: Stu Hurd, Town of Bennington

From: Patricia Coppolino, VTDEC

Through: George Desch, SMS Chief, VTDEC

Date: February 22, 2006

Subject: JARD

**Overview of JARD**

Based on a December 2005 report prepared by Stone Environmental for the Vermont Department of Environmental Conservation several areas of the site are direct health hazards to the human population around and trespassing onto the JARD site.

We believe that EPA Removals can fulfill its role to remove threats to human health (and the environment secondarily) by addressing the imminent threats that are known to be present at the JARD site. The most pressing concern is exposure of PCBs to trespassers and users of adjacent properties via airborne migration of PCBs and direct contact threats from contaminated soils and residues in the derelict building. Ideally, we see three major components of the Removals project and request that EPA Removals address these ongoing exposures through 1) demolition and disposal of the building and slab; 2) removal of the remaining significantly contaminated surficial soils (0-3 ftbgs), underground piping and tanks; and 3) capping of the building and soil areas.

Of particular concern is the fact that the building and contaminated soils at the site have never been adequately secured and therefore present an ongoing threat to public health. The following is a summary of the areas of concern that pose a risk to human health that we believe should be addressed by EPA Removals.

**BUILDING AND SLAB**

Sampling and investigation have shown that the building at the JARD site, which is not secured, has elevated levels of PCBs present on the surfaces within the building. These

concentrations ranged from 15µg/100cm<sup>2</sup> to 3,200 µg/100cm<sup>2</sup> on the metal surfaces of the walls and from 99mg/kg to 260 mg/kg on the concrete floor. TSCA cleanup criteria for non-porous surfaces are ≤10 µg/100cm<sup>2</sup> and <100 µg/100cm<sup>2</sup> for *High Occupancy Areas and Low Occupancy Areas*, respectively. The cleanup criteria for the porous surfaces (floor) are the same as the soil cleanup criteria listed below.

What DEC would like to see with the building:

DEC believes there are many risks associated with the building and attempts to secure the site through fencing, locking and boarding-up the building will not be effective for more than a few days or weeks and resources to do so are wasted. We believe that the only means to effectively mitigate the threat is to remove it. Therefore the first priority would be to remove the building so that it does not attract building trespassers. The best way to remove this hazard is to remove the building and slab and dispose of them properly. We believe that soil removal under the slab is warranted because it is believed that these soils may be a large contributor to the contamination that is reaching the Bennington Publicly Owned Treatment Works and therefore degrading the quality and reuse potential of the biosolids produced at the POTW.

### **SURFICIAL SOILS**

The soils in the area of the building remain substantially contaminated and direct contact is a threat because adjacent uses include public recreation and school activities. The direct contact threat due to site trespassers should be eliminated through soil removal and capping. We have not determined if soil contamination is contributing to the contamination of groundwater, but there may be substantial benefit to groundwater quality gained through removal of the most highly contaminated soils under the slab and areas around the building.

The site was segmented into different areas (see attached maps) and is summarized below.

Area A – represents the footprint of the building (soils under the slab)

Area B - represents the area between the building and the fence

Area C – represents the area between the fence and the Roaring Branch of the Walloomsic River

Area D – represents the area between Bowen Road and the building (the front portion of the site, along with the drainage swale that runs along Bowen Road)

Area E – represents the area between the fence line and the Little League Fields

Along with the segmentation of the site, three different depths were sampled in the soils

Surficial Soil were sampled from 0-0.6 ftbgs

Middle Soils were sampled around 2.5ftbgs

Deep Soils were sampled around 5 ftbgs

For the purpose of this discussion I will focus on the PCB impacted Surficial and Middle soil depths. Soils also were impacted with other contaminants above Risk Based

Concentrations such as Zinc, chlorinated solvents and DEHP. These other contaminants appear in the same locations as the PCB contaminated soils, therefore removal of the PCB soils will also address the soils contaminated with Zinc, chlorinated solvents and DEHP.

#### **Concentration guidelines (for comparison)**

Vermont currently uses the Region IX PRGs as a guideline for soil cleanup criteria and/or TSCA for PCBs

TCE    0.053 mg/kg (residential setting)  
         0.11 mg/kg (industrial setting)

DEHP   35 mg/kg (residential setting)  
         1,200 mg/kg (industrial setting)

PCBs (TSCA soil)

**High Occupancy Areas**         $\leq 1$  ppm without further conditions  
    $>1\text{ppm} \leq 10$  ppm covered with cap

**Low Occupancy Areas**         $\leq 25\text{ppm}$

PCBs can remain at concentrations  $>25$  to  $\leq 50\text{ppm}$  if the site is secured by a fence and marked with a sign including the  $M_L$  mark. (**this option will not work**)

PCBs can remain at concentrations  $>25$  and  $\leq 100$  if the site is covered with an approved cap.

#### **Area A sub-slab soils**

Area A soils were collected from 0.5 to 1.6 feet below the slab.

TCE concentrations for soils in Area A ranged from 0.12 mg/kg to 0.96 mg/kg.

PCB concentrations for soils in Area A ranged from 0.55 mg/kg to 32,000 mg/kg.

DEHP concentrations for soils in Area A ranged from 33 mg/kg to 22,000 mg/kg.

#### **Area B**

Surficial Soil concentrations for PCBs in Area B ranged from ND to 73 mg/kg

Middle Soil concentrations for PCBs in Area B ranged from ND to 8,900mg/kg

Deep Soil concentrations for PCBs in Area B ranged from ND to 960 mg/kg

#### **Area C**

Surficial Soil concentrations for PCBs in Area C ranged from ND to 65 mg/kg

Middle Soil concentrations for PCBs in Area C ranged from ND to 57mg/kg

Deep Soil concentrations for PCBs in Area C ranged from ND to 7.5 mg/kg

#### **Area D**

Surficial Soil concentrations for PCBs in Area D ranged from ND to 10 mg/kg

Middle Soil concentrations for PCBs in Area D ranged from ND to 36 mg/kg

Deep Soil Concentrations for PCBs in Area D ranged from ND to 3.7 mg/kg

**Area E**

Surficial Soil concentrations for PCBs in Area E ranged from ND to 2.1 mg/kg

Middle Soil concentrations for PCBs in Area E were not sampled

Deep Soil concentrations for PCBs in Area E were not sampled

It is of the opinion of VTDEC that PCB contaminated soils 0-3 feet bgs that have concentrations greater than 25 ppm are a direct exposure risk to human health and should be removed and disposed of properly.

**Subsurface Piping and Underground Tanks**

Several dry wells and underground storage tanks are still in place on the property and are most likely one of the larger contributors of contamination to near surface soils and groundwater.



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